

# Application

Various applications increasing the value of MRI result for the diagnosis



FatSat

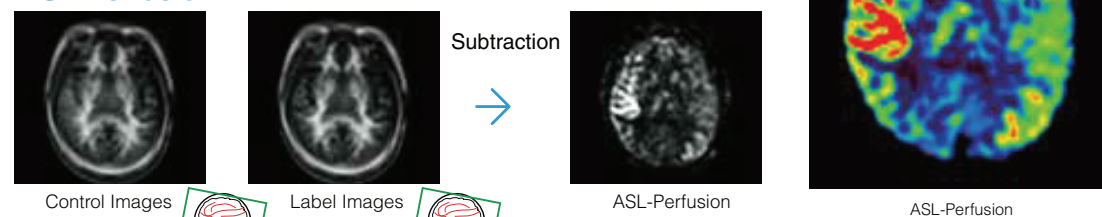


FatSep Normal

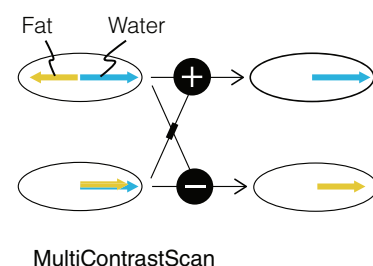


FatSep Fine

## ASL-Perfusion\*\*

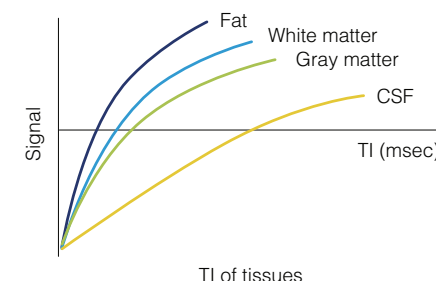


## FatSep



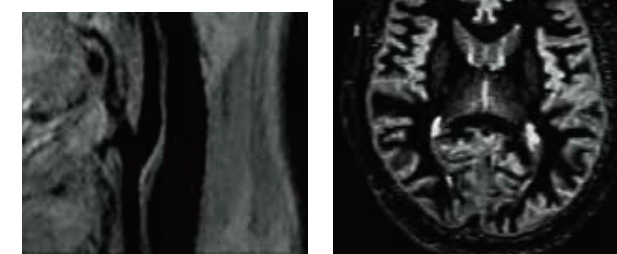
MultiContrastScan

## isoDIR\*\*



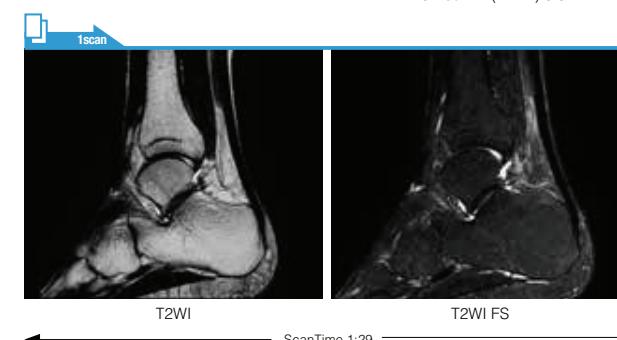
T1 of tissues

## isoMSDE\*\*



3DisoMSDE 2:31

3DisoDIR (WAIR) 3:31



T2WI

T2WI FS

ScanTime 1:29

## All Around RADAR\*



Applicable with large number of sequences  
No limitation in coil/oblique

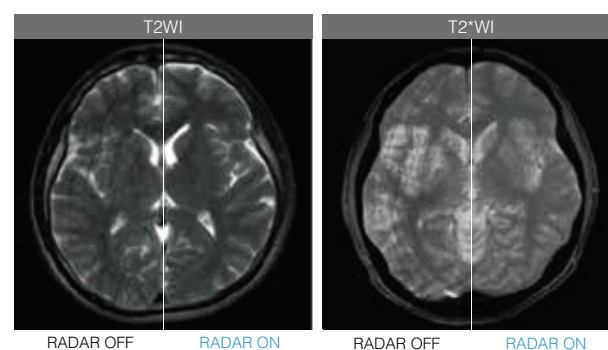
\*RADial Acquisition Regime



Applicable with RAPID, high-speed imaging technology



Applicable with brain routine exams

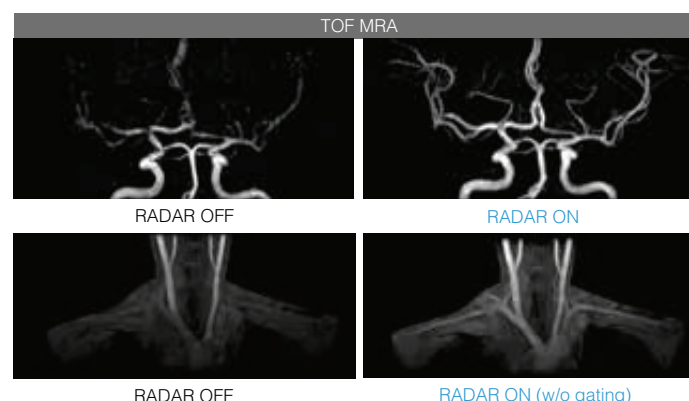


RADAR OFF

RADAR ON

RADAR OFF

RADAR ON



RADAR OFF

RADAR ON (w/o gating)

**FUJIFILM**  
PAKISTAN (PVT) LTD.

High Speed

High Image Quality

Automation

# ECHELON Smart *with* SynergyDrive

IP-RAPID X  
REALISE PLUS  
Flexibility Plus

**FUJIFILM PAKISTAN (PVT) LTD.**

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Hyderabad: 022-2787277    Faisalabad: 041-8548153    Sargodha: 048-3768410    Rahim Yar Khan: 068-5877151    Gujrat: 053-3515415  
Sukkur: 071-5628211    Multan: 061-4543472 / 4545106    Sahiwal: 0404-226375    Gujranwala: 055-3856479    Swat: 0946-721433

# SynergyDrive

## Optimized Workflow

IP-RAPID × REALISE Plus

## Value by SynergyDrive

**"Pluses" made possible by the high-speed and high-image quality solution.**

IP-RAPID × REALISE Plus provide a "Plus" in Speed and Visibility.

A variety of Pluses that can be freely selected according to the exam situation improving the quality of exams.

## SynergyDrive:

### High Speed

#### Speed Plus with IP-RAPID

Shortens the scan time while maintaining image quality by optimizing undersampling and iterative reconstruction.

Shortened imaging time ensures time for Plus One Scan.

For your easier diagnosis.

### High Image Quality

#### Visibility Plus with REALISE Plus

High image quality solution promotes ease of diagnosis.

New denoising methods achieve high image quality with less noise.

Reduce radiologist workload

### Automation

#### Flexibility Plus with Auto series

A single click is all you need to start the MRI exam.

System supports complicated operations to provide extra flexibility.

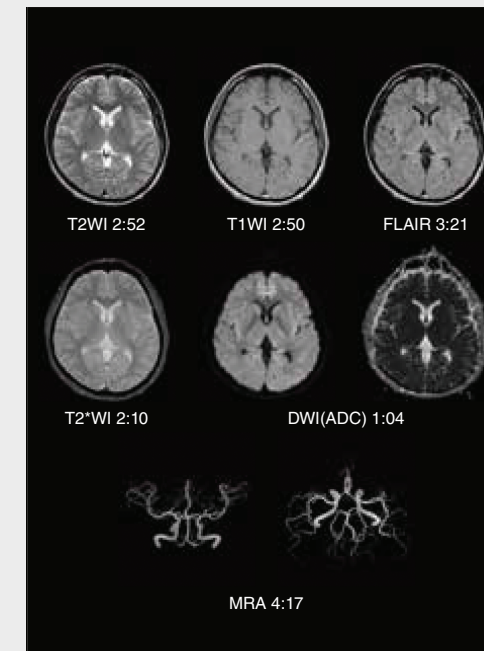
Better patient care

## IP-RAPID × REALISE Plus

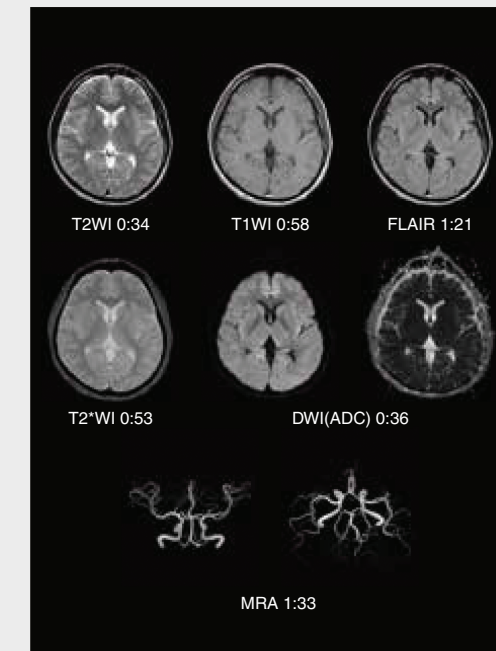
achieves even faster and higher image quality

IP-RAPID high-speed solution merges undersampling and iterative reconstruction to shorten scan time while maintaining image quality.

Normal



IP-RAPID × REALISE Plus



64%  
Reduction

Total ScanTime

16:34

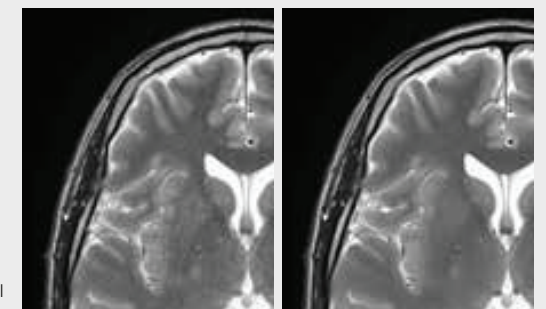
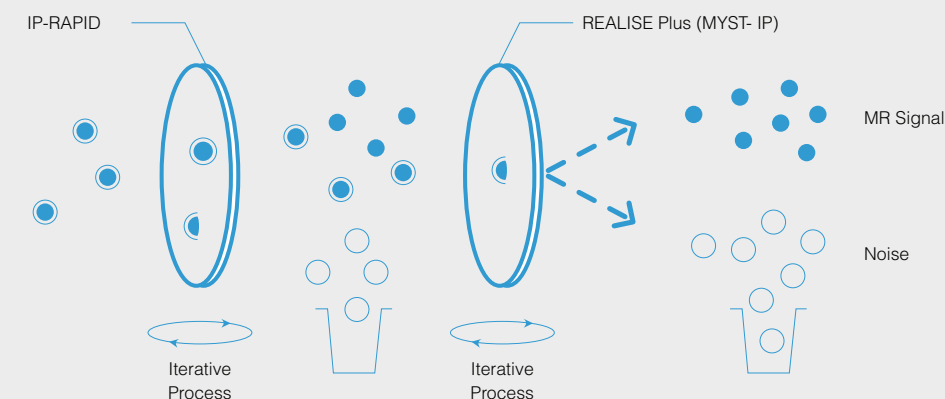


Total ScanTime

5:55

## IP-RAPID × REALISE Plus

REALISE Plus is a new noise reduction technology developed for IP-RAPID. REALISE Plus is able to separate noise and signal properly by further searching noise and signal (MYST-IP method) on the noise reduced data by IP-RAPID.



46%  
UP

\*Value is compared between the examples



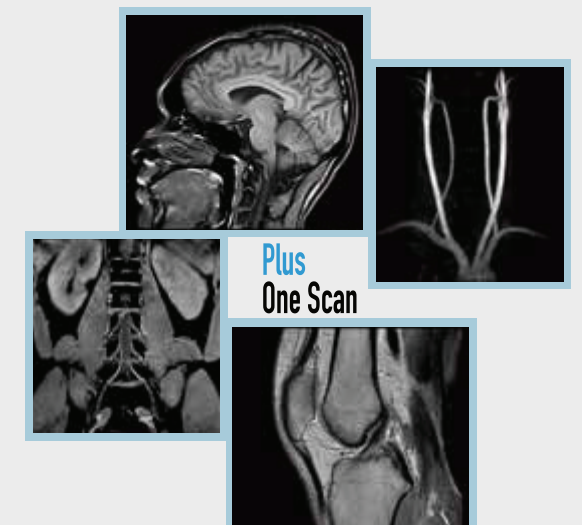
Plus  
One Scan

## Diagnosis information Plus

Thanks to shortened scan time, more scans can be performed within the



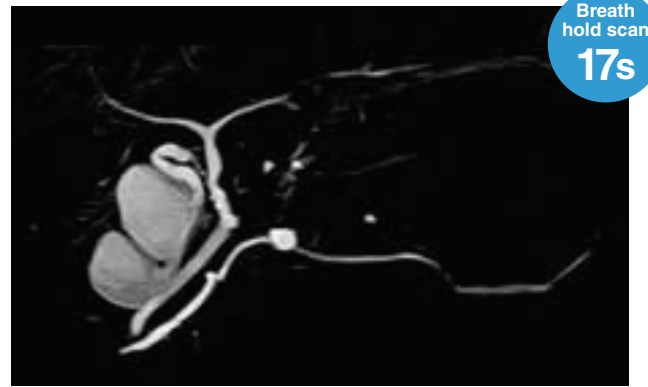
+1 Plus  
One Scan







IP RAPID × REALISE Plus shortens the scan time of conventional time consuming procedures such as respiratory gating scan and navigator measurement, and can be applied to exam with short scan time such as breath-holding scan.



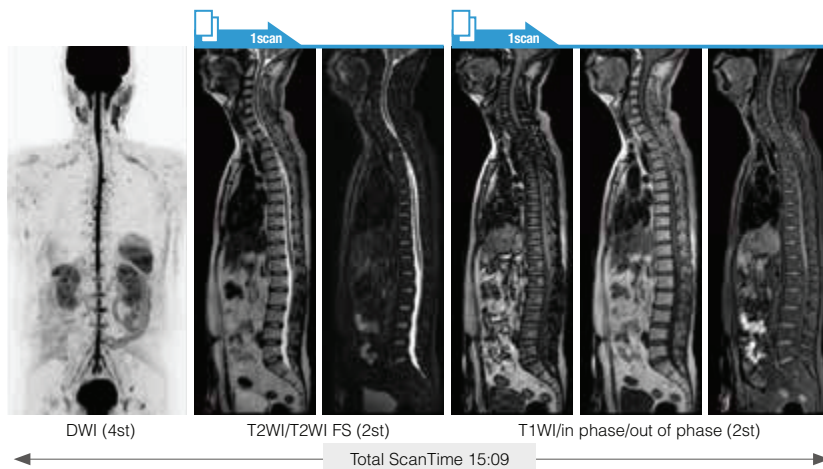
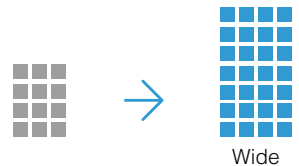
3D MRCP Breath Hold

Breath hold scan  
17s



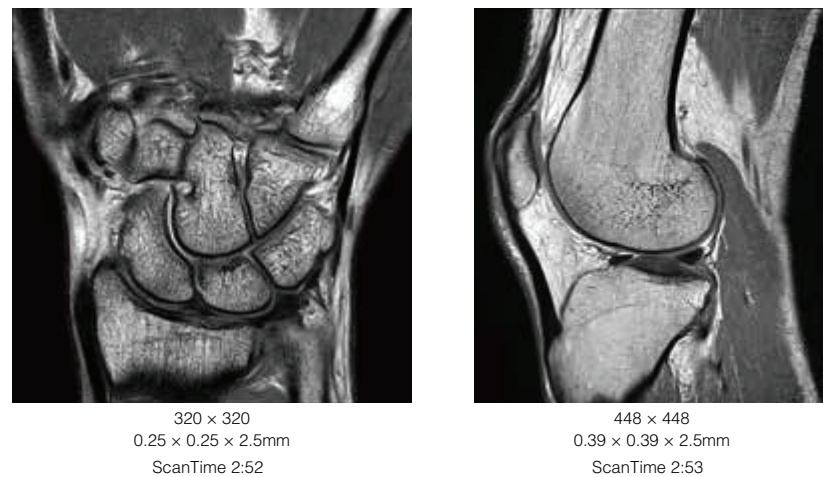
### Wide Scan

IP-RAPID × REALISE Plus can be used with a wide variety of scan methods, including multi-contrast scanning, FatSep, and DWI.

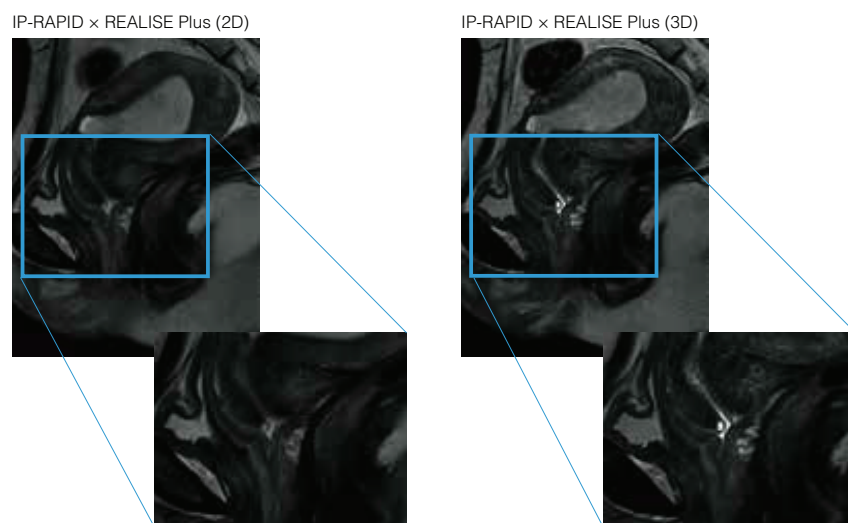
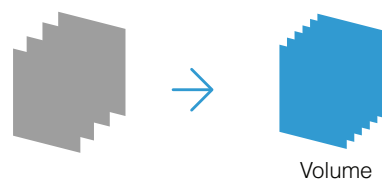


### High Resolution Scan

IP-RAPID × REALISE Plus enables to shorten scan time with no compromise image quality, thus high resolution scan enables within the current scan time.



IP-RAPID × REALISE Plus can be used with wide variety 3D sequences in addition to 2D sequences.



# Flexibility Plus with Auto Series

The Auto series is designed to provide stable exam results, even if operators who are not familiar with MRI.

Patient Care Support

The Auto series supports simple tasks during scanning.

Management Support

Operation Support

Diagnosis Support

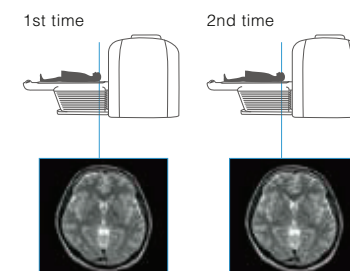
The Auto series supports diagnoses made at the same scan position and with manual clipping decrease variation and reduce stress.

The Auto series supports to provide time to diagnose images for requirement of additional scan.

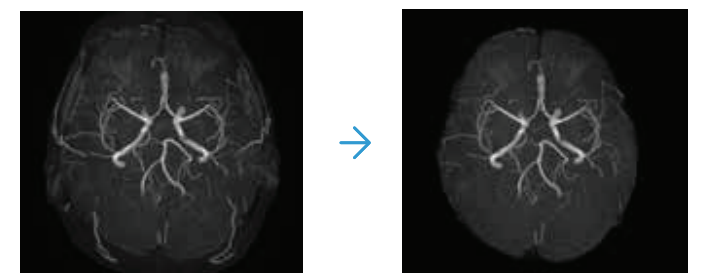


AutoPose Scanning Post-processing DICOM Transfer

AutoPose



AutoClip\*\*



95<sup>2</sup>%

# SmartCOMFORT

Designed in consideration with everyone involved in the MRI examination to provide space of "Comfort"

## Workflow Coil System

Receiver coils are easily set and deliver high image quality

A design focused on ease of use while maintaining high image quality, reduces exam time by eliminating the need for coil replacement.

## Workflow Coil System

[ Head & Neck / Spine coil ]

Head&Neck coil



[ Flex Body coil ]



OpenHead coil



**OPEN** OpenHead coil  
Open space Plus

**FREE** Free-breathing scan  
Free-breathing examination Plus

**SOFT** SoftSoundSuite  
The comfort of silence in diagnosis Plus

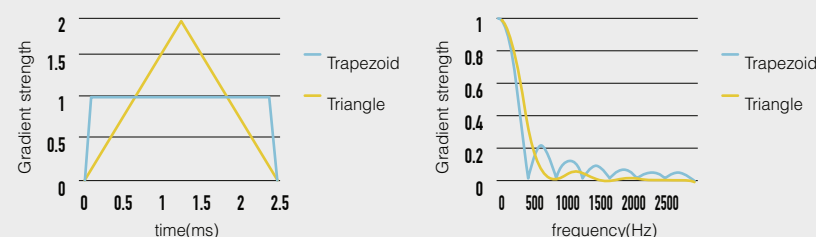
96% Reduction

FUJIFILM SoftSound technology reduces the impact on image contrast and scan time.

The characteristics of the MRI sound varies depending on the waveform of the gradient magnetic field pulse.

SmartCOMFORT reduces the scan noise with almost no change in scan time, contrast, SNR, or spatial resolution by designing the waveform of the gradient magnetic field pulse.

**Principle of scan noise reduction:**  
Frequency characteristics change due to waveform changes in the gradient magnetic field.



Gradient waveforms and frequency characteristics

\*Varies according to the scan conditions.

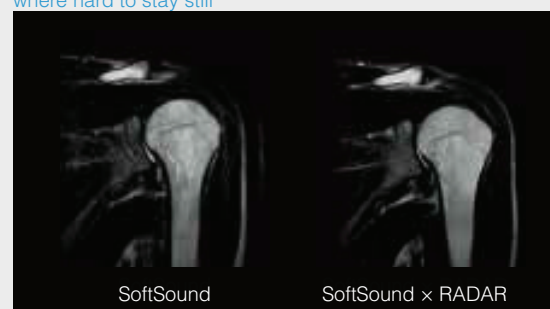
## AdvancedSoftSound

Can be also applied to Heavy T2\*WI "BSI" and 3D T1 volume scan



## SoftSound x RADAR

SoftSound can be used in combination with RADAR in areas where hard to stay still



## System Specifications

ECHELON Smart is equipped with hardware for high-speed and high-performance scan.

### High Performance Hardware

#### Gradient system

Maximum Gradient Strength 33mT/m  
Maximum slew rate 130T/m/s

#### RF system

Maximum RF output 18kW

#### HOSS

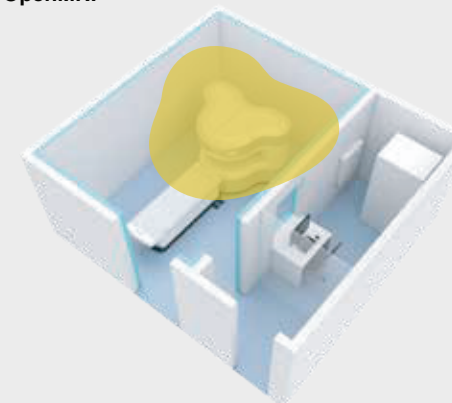
High Order Shimming System

# SmartSPACE

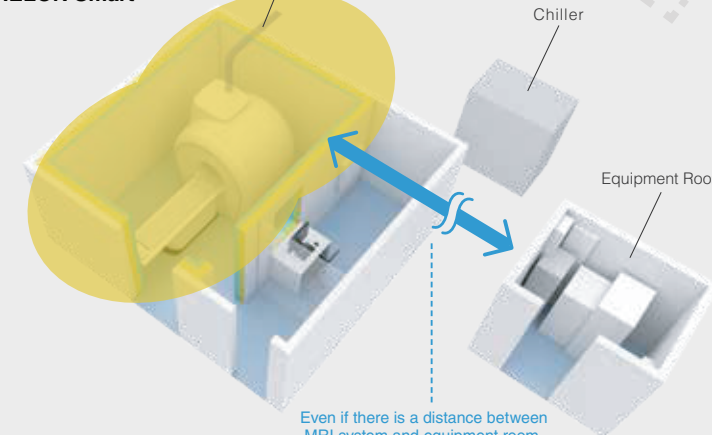
Compact design for greater flexibility in installation

41% SPACE SAVING

OpenMRI



ECHELON Smart



[Flexible Site Plan]

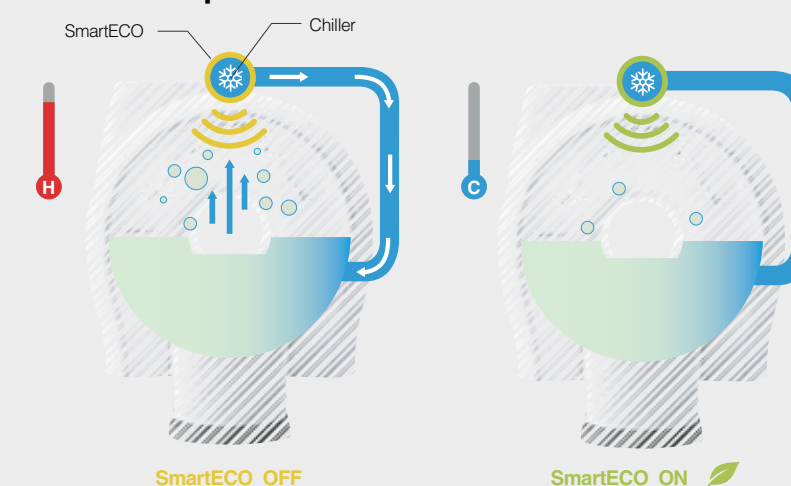
An example of a equipment room installed in a vacant space.

Even if there is a distance between MRI system and equipment room, installation is possible.

# SmartECO

Effectively reduces power consumption via intermittent cold head operation

17% LESS



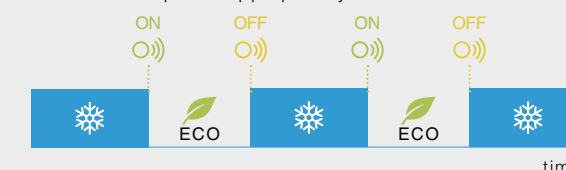
### Without SmartECO function

Cold head constantly operating



### With SmartECO function

Cold head suspends appropriately



Zero-boil-off design eliminates liquid helium consumption

# Sentinel Analytics 24 HOURS

Improving the uptime through predictive failure diagnosis